



教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	賽局理論與經濟應用(一)			學年/學期 Academic Year/Semester	100/2
課程名稱(英文) Course Name in English	Game Theory with Economic Applications (I)				
科目代碼 Course Code	IIE_57900	系級 Department & Year	碩士	開課單位 Course-Offering Department	經濟學系
修別 Type	選修 Elective	學分數/時間 Credit(s)/Hour(s)		3.0/3.0	
授課教師 Instructor	/林慧菁				
先修課程 Prerequisite	/				
課程描述 Course Description					

賽局理論與經濟應用（一）

教學目標：賽局在社會科學中之應用相當廣泛，舉凡政治、經濟、產業、管理等各學界皆有運用賽局之範例，本課程將理論與應用並重，強調賽局理論之邏輯性思維而非艱澀的數學驗證，以培養學生應用賽局理論來設計經濟模型及解釋經濟問題之能力。

評分標準：期末考(take-home)(30%)、期末報告(60%)、以及上課表現(10%)。

教科書：

[R]. Rasmusen, E (2007), Games and Information, 4th ed. Blackwell.

可供碩、博士班參考之書籍：

[Fr]. Friedman, J. W. (1991), Game Theory with Applications to Economics, 2nd ed., Oxford U. Press.

[G]. Gibbons, R. (1992), Game Theory for Applied Economists, Princeton U. Press.

[Fu]. Fudenberg, D. and J. Tirole (1991), Game Theory, MIT Press.

[M]. Myerson, R. B. (1991), Game Theory: analysis of Conflict, Harvard U. Press.

[O]. Osborne, M. J. and A. Rubinstein (1994), A Course in Game Theory, MIT Press.

以及其他補充教材與論文等。

課程大綱：

Introduction ([Fr] Ch. 1, [R] Ch.1-2, [G] 1.1, 2.4A)

Game form, definition and solution concepts

Complete Information:

Strategic form games ([Fr] Ch. 3, [R] Ch. 3, [G] pp 1-48)

Dominant Strategies and Dominated Strategies

Nash equilibrium

App. Cournot game

Bertrand game

Etc.

Extensive form games ([Fr] Ch. 2, [R] Ch.4, [G] pp 55-137)

Dynamic games, backward induction and Nash equilibrium

Subgame perfection

Sequential equilibria

Bargaining games (Nash, Ariel Rubinstein)

App. Stackelberg game

Centipede game

Entry deterrence game

Etc.

*Repeated games ([Fr] Ch. 4-5, [R] Ch. 5, [G] 2.3)

Finitely repeated prisoners' dilemma

Folk theorem

Reputation

Signaling

App.

Incomplete information: ([Fr] Ch., [R] Ch. 6-, [G] pp 143-252)

Bayesian Nash equilibrium

Perfect Bayesian equilibrium

Bargaining with private information

Sequential equilibrium

Revelation Principle

App.

Implementation Theory ([R] Ch. 10, [O] Ch. 10)

Nash implementation

Subgame perfect implementation

Mechanism design

App.

Cooperative Games ([Fr] Ch. 6-8)

課程目標 Course Objectives

近年來經濟分析大量引用賽局理論，研究生必須充分掌握此一工具，方有能力學習與理解新的經濟理論，為獨立的研究能力奠定基礎

圖示說明Illustration：● 高度相關 Highly correlated ○ 中度相關 Moderately correlated

授課進度表 Teaching Schedule & Content	
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週次Week	內容 Subject/Topics	備註Remarks
1	Introduction ([Fr] Ch. 1, [R] Ch.1-2, [G] 1.1, 2.4A);	
2	Game form, definition and solution concepts	
3	Strategic form games; Dominant Strategies and Dominated Strategies	
4	Strategic form games; Nash equilibrium; App. Cournot game; Bertrand game	
5	Information structur	
6	Information structur	
7	Information structure	
8	Extensive form games	
9	期中考試週 Midterm Exam	
10	Extensive form games	
11	Extensive form games	
12	Extensive form games	
13	Repeated games	
14	Repeated games	
15	Repeated games	
16	Repeated games	
17	Repeated games	
18	期末考試週 Final Exam	

教 學 策 略 Teaching Strategies	
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☒ 課堂講授 Lecture
 ☐ 分組討論 Group Discussion
 ☐ 參觀實習 Field Trip
 ☐ 其他 Miscellaneous:

學期成績計算及多元評量方式 Grading & Assessments

[illegible]

評量方式補充說明
Grading & Assessments Supplemental instructions

教科書與參考書目（書名、作者、書局、代理商、說明）
Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)

教科書：

[R]. Rasmusen, E (2007), Games and Information, 4th ed. Blackwell.

可供碩、博士班參考之書籍：

[Fr]. Friedman, J. W. (1991), Game Theory with Applications to Economics, 2nd ed., Oxford U. Press.

[G]. Gibbons, R. (1992), Game Theory for Applied Economists, Princeton U. Press.

[Fu]. Fudenberg, D. and J. Tirole (1991), Game Theory, MIT Press.

[M]. Myerson, R. B. (1991), Game Theory: analysis of Conflict, Harvard U. Press.

[O]. Osborne, M. J. and A. Rubinstein (1994), A Course in Game Theory, MIT Press.

課程教材網址（教師個人網址請列在本校內之網址）
Teaching Aids & Teacher's Website (Personal website can be listed here.)

<http://faculty.ndhu.edu.tw/~hclin/>

其他補充說明 (Supplemental instructions)